

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

Jodi A. Schwendimann, f/k/a
Jodi A. Dalvey,

Plaintiff,

v.

Arkwright Advanced Coating, Inc., and
Diatec Holding S.p.A,

Defendants.

**MEMORANDUM OPINION
AND ORDER**

Civil No. 11-820 ADM/JSM

Arkwright Advanced Coating, Inc.,

Counterclaim Plaintiff,

v.

Jodi A. Schwendimann, f/k/a
Jodi A. Dalvey, and
Cooler Concepts, Inc.,

Counterclaim Defendants.

Devan V. Padmanabhan, Esq., Winthrop & Weinstine, P.A., Minneapolis, MN, on behalf of
Plaintiff.

Kurt J. Niederluecke, Esq., Fredrikson & Byron, PA, Minneapolis, MN, on behalf of Defendants.

I. INTRODUCTION

On September 15, 2015, a claim construction hearing was held before the undersigned
United States District Judge in the patent infringement action brought by Plaintiff Jodi A.
Schwendimann (“Schwendimann”) against Defendant Arkwright Advanced Coating, Inc.

(“AACI”). Schwendimann alleges AACI infringes claims of United States Patent Nos. RE41,623¹ (the “’623 Patent”), 7,749,581 (the “’581 Patent”), 7,754,042 (the “’042 Patent”), 7,766,475 (the “’475 Patent”), 7,771,554 (the “’554 Patent”), 7,824,748 (the “’748 Patent”), and 8,703,256 (the “’256 Patent”) (collectively, the “Schwendimann Patents-in-Suit”). AACI has counterclaimed for infringement of its patents, United States Patent Nos. 6,667,093 (the “’093 Patent”), and 7,943,214 (the “’214 Patent”) (collectively, the “AACI Patents-in-Suit”). AACI’s Motion to Exclude Expert Testimony [Docket No. 281] will also be decided by this Order.

II. BACKGROUND

A. The Parties

Schwendimann’s business, Cooler Concepts, Inc. (“CCI”), manufactures and sells specialty paper products. Am. Compl. [Docket No. 264] ¶ 2. All of the Schwendimann Patents-in-Suit relate to methods for transferring an image onto a colored base, such as a T-shirt, using heat. Am. Compl. ¶¶ 15–20. AACI is a Rhode Island corporation with its principal place of business in Fiskeville, Rhode Island. Answer & Countercl. [Docket No. 268] ¶ 3. AACI also owns patents that cover methods for transferring an image onto a colored base. *Id.* ¶¶ 52, 57.

B. The Technology at Issue

The Schwendimann Patents-in-Suit assert claims describing a method or article for transferring printed images onto dark colored cloth or other material using heat. Prior to the Schwendimann Patents-in-Suit, image transfer sheets for transferring images to light colored material were known in the art. Lindell Decl. [Docket No. 278] Ex. 13 (“Schwendimann Interference Opp’n Mot.”) 1. While the prior art was effective to transfer the image to light

¹ The ’623 Patent is a reissue of United States Patent No. 6,884,311.

colored material, transfer of images to dark colored material was problematic because the dark color tended to obscure the image. Id. The first advancements to improve the quality of the image disclosed a two-step process. First, a white or light colored background was applied with heat to the dark colored material. Id. at 1–2. Next, an image was aligned with and applied separately to the light colored background. Id. at 2. While functional, this process was not commercially desirable primarily because aligning the image with the light colored background was difficult and frequently resulted in misaligned images that were unmarketable and needed to be discarded. Id. The technology at issue here solves this problem by transferring both the white or light colored background and the image at the same time.

C. Procedural History

This case has a particularly lengthy history. It began in 2008 when Schwendimann sued AACI's predecessor-in-interest, Arkwright, Inc. Schwendimann v. Oce Imaging Supplies, Inc., No. 08-162 (ADM/JSM). That suit was eventually settled and dismissed and the current case was filed in 2011. Shortly after filing, AACI moved to dismiss arguing that Schwendimann did not own the Schwendimann Patents-in-Suit at the time of filing and she lacked standing to assert her claims. See Mot. Dismiss Lack Personal Jurisdiction [Docket No. 47]. Schwendimann responded by moving for Partial Summary Judgment on Standing [Docket No. 51]. On March 19, 2012, AACI and Schwendimann's motions were both denied. See Mem. Op. Order [Docket No. 87]. Nearly two months later, after some fact discovery was taken, Schwendimann renewed her motion for Partial Summary Judgment on Standing [Docket No. 102], which was granted on August 10, 2012. See Mem. Op. Order [Docket No. 115]. AACI moved to Certify Interlocutory Appeal and Stay [Docket No. 118]. See Mem. Op. Order [Docket No. 125]. On November 2,

2012, the case was stayed pending appeal to the Federal Circuit.

On April 26, 2013, the Federal Circuit declined to entertain the standing question and the stay was lifted. See Order [Docket No. 128]. Between December 20, 2013 and February 25, 2015, the case was again stayed pending an interference proceeding with the Patent Trial and Appeal Board (“PTAB”). See Docket Nos. 224, 225, 237. Upon completion of the interference proceeding, the stay was again lifted and on May 21, 2015 Schwendimann filed an Amended Complaint [Docket No. 264]. On July 27, 2015 the parties submitted their Joint Claim Construction Statement [Docket No. 270].

D. Disputed Claim Terms

The parties identified 32 disputed claim terms in the Schwendimann Patents-in-Suit and two claim terms in the AACI Patents-in-Suit as at issue here. See Joint Claim Construction Statement Ex. A (“Claim Construction Statement”). AACI argues that all 32 claim terms are in need of construction. Schwendimann disagrees, arguing that only seven require construction because the remaining claim terms are either not in controversy because AACI did not assert a construction as a basis for noninfringement or they should be accorded their plain and ordinary meaning.

While the parties strongly disagree as to the scope of claim construction, they agree that the claim term of paramount significance is “white layer.” Unfortunately this is the full extent of the parties’ agreement on the meaning of “white layer.” AACI argues that statements Schwendimann made during the interference proceeding must be viewed as a disclaimer when construing the “white layer” claim term. AACI also argues that Schwendimann further represented that each of her claims requires a “white layer limitation” and therefore the “white

layer” disclaimer must be incorporated in 13 other claim terms that AACI alleges are synonymous with, incorporate, or interact with the “white layer.” Schwendimann entirely disagrees with AACI as to the significance of her statements made during the interference proceeding. Schwendimann does not believe that any disclaimer occurred and thus, there is no basis to incorporate certain limitations into 13 “white layer” claims.

The parties agree seven terms: “Colored substrate,” “image imparting member,” “opaque first layer,” “overlying; overlaid,” “release layer,” “underlying,” and “white layer” are in controversy and require construction.

There are three terms that the parties agree are in controversy but which Schwendimann argues no claim construction is necessary. The three terms are: “Contacting/contactable,” “disposed between,” and “surface configured to receive and carry indicia.”

There are 22 terms that the parties disagree as to whether they are truly in controversy and require construction. They are: “Article for imparting/transferring an image,” “combining,” “having a melt index/includes a melt index,” “image transfer sheet,” “image transfer substrate,” “image-imparting layer,” “impregnated,” “indicia-receptive layer,” “ink receptive portion,” “ink-receptive layer,” “layer,” “mix; mixed, mixture,” “obtaining,” “opaque background,” “opaque, non-transparent background,” “release coating,” “release coating portion,” “release-enhancing coating,” “release-enhancing layer,” “substantially white background,” “transfer article,” and “order of method steps.”

Schwendimann originally asserted infringement of 141 claims in her seven patents. On September 22, 2015, AACI filed a Motion to Compel [Docket No. 303] asking Schwendimann to reduce the number of claims she asserts as a basis for infringement from 141 to 20. On October

23, 2015, Magistrate Judge Mayeron granted AACI's motion and Schwendimann has now identified the 20 claims she intends to pursue. See Pl.'s Election of Claims [Docket No. 338]. In reducing the number of claims, nine disputed claim terms appear only in claims that are no longer being asserted as a basis for infringement. These terms are therefore no longer in controversy and will not be construed.²

The parties agree that two claim terms "elastic plastic" and "adhesive layer" in the AACI Patents-in-Suit are in controversy and require construction.

III. DISCUSSION

A. Motion to Exclude Expert Testimony

AACI argues that the reply declaration of Schwendimann's expert, Scott Williams [Docket No. 280] is untimely and should be excluded from the record. Schwendimann, while acknowledging that the Williams declaration was untimely, argues that its inclusion into the record was motivated by AACI expert's rebuttal opinion that exceeded the scope of the parties' agreement. Schwendimann therefore maintains that the Williams reply declaration was substantially justified and is not sufficiently prejudicial to justify striking it from the record.

Under Federal Rule of Civil Procedure 37(c)(1), exclusion of an expert's untimely opinion is required unless the offending party's tardiness was substantially justified or harmless. Fed. R. Civ. P. 37(c)(1); Engleson v. Little Falls Area Chamber of Commerce, 210 F.R.D. 667, 669 (D. Minn. 2002). The Williams reply declaration will not be excluded because AACI is not

² The terms identified in the Claim Construction Statement that are no longer asserted as a basis for infringement are: "Substantially white background;" "opaque, non-transparent background;" "image-imparting layer;" "having a melt index/includes a melt index;" "image transfer substrate;" "release coating portion;" "release-enhancing coating;" "release-enhancing layer;" and "substantially white background."

harm by its inclusion. Although late, AACI received the Williams' reply declaration sufficiently in advance of its opening Markman brief, permitting AACI to address and rebut the opinions Williams proffered. Further, AACI did not suffer harm because the opinions in the Williams declaration are not relied upon to resolve the claim construction issues described below.

This is not intended, however, to sanction Schwendimann's conduct. As expressed at the hearing, Schwendimann's disregard for a scheduling order deadline is concerning. If Schwendimann sincerely believed AACI's conduct warranted a reply declaration, requesting leave to submit the Williams reply would likely have obviated the need for this motion.

B. Claim Construction

1. Standard of Review

Claim construction is a matter of law. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). In construing claims, courts should look first to intrinsic evidence, which includes the claims, the specification, and the prosecution history. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). Claim terms are "generally given their ordinary and customary meaning," which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (quotation and citations omitted). However, a patentee can choose to be "his or her own lexicographer by clearly setting forth an explicit definition for a claim term." Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed. Cir. 1999). Claim terms "should be construed consistently with [their] appearance in other places in the same claim or other claims of the same patent." Rexnord Corp. v. Laitram Corp., 274 F.3d

1336, 1342 (Fed. Cir. 2001). In addition, the specification is usually “dispositive; it is the single best guide to the meaning of a disputed term.” Vitrionics, 90 F.3d at 1582. Courts are nonetheless cautioned not to import limitations from the specification into the claims. Phillips, 415 F.3d at 1323; Laitram Corp. v. NEC Corp., 163 F.3d 1342, 1347 (Fed. Cir. 1998).

While courts may consider extrinsic evidence to educate themselves about the patent and technology at issue, it is improper to rely on extrinsic evidence in construing claims unless, after consideration of all the intrinsic evidence, ambiguity remains. Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc., 152 F.3d 1368, 1373 (Fed. Cir. 1998); Vitrionics, 90 F.3d at 1584. Extrinsic evidence is “evidence which is external to the patent and file history, such as expert testimony, inventor testimony, dictionaries, and technical treatises and articles.” Vitrionics, 90 F.3d at 1584. Dictionaries may be useful to courts in understanding the ordinary and customary meaning of words, and courts may “rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.” Phillips, 415 F.3d at 1322-23.

2. Claim Construction

a. Schwendimann Patents-in-Suit

i. “White Layer”

The claim term “white layer” appears in the ’581 Patent, ’475 Patent, ’554 Patent, and ’748 Patent. The specification defines “white layer” as “a layer on a transfer sheet positioned between a release layer and a receiving layer. The white layer imparts a white background on a

dark substrate.” ’623 Patent 3:30–34.³ Schwendimann submits that the “white layer” is “a layer comprising a concentration or configuration of pigment providing an opaque background for received indicia and which further comprises a polymer that melts or is fusible such that it intermingles to some degree with another layer or layers during application.” Claim Construction Statement 48. AACI argues that the “white layer” is “a distinct polymeric layer of the image transfer sheet/image transfer article positioned between the release layer and image receiving layer that provides a white background for the received image/indicia and that melts and mixes with the other layers at ironing temperatures, causing the white layer polymer to encapsulate the indicia.”⁴ Id. at 48–49. In a general sense, the parties agree that the white layer provides the white or opaque background for the received indicia and that the white layer must melt or become fusible upon application of heat. Where the parties’ proposed definitions diverge is whether the melting or fusing occurs at ironing temperatures, and what effect the melting or fusing of the white layer has on other layers in the image transfer sheet.

As mentioned above, the disagreement here largely stems from statements Schwendimann made during the interference proceeding. AACI contends that Schwendimann narrowed the scope of the white layer limitation by repeatedly stating that the white or opaque layer must melt and mix at ironing temperatures and that the melting causes encapsulation of the ink. Schwendimann responds that the statements AACI cites are not clear and unambiguous evidence of disclaimer. Therefore, argues Schwendimann, nothing in the interference

³ Because the specifications of the Schwendimann Patents-in-Suit are nearly identical and the cited language appears in each patent, only one patent will be cited.

⁴ AACI’s usage of a “/” is a signal that for any given claim term, either the term “image” or “indicia” may be used.

proceeding should be incorporated to narrow the scope of the white layer claim term.

1. Interference Proceeding

On September 26, 2013, the PTAB declared an interference between three AACI continuing applications and three of the Schwendimann Patents-in-Suit, the '623, '042, and '581 Patents. Mem. Supp. Mot. Stay [Docket No. 163] 7. AACI argued that since its continuing applications have the earliest priority date, AACI is the first inventor and Schwendimann's '623, '042, and '581 Patents should be cancelled.⁵ Schwendimann responded by, among other things, challenging the patentability of AACI's applications arguing that they lacked sufficient written description and enablement support. Schwendimann argued that all of the involved claims require a white background layer that melts and mixes with other layers. Since AACI's specification described only embodiments that do not melt at temperatures below 220° C, the AACI applications do not enable an image transfer article with a white layer that melts at temperatures below 220° C. The PTAB agreed with Schwendimann, holding that AACI's applications failed to satisfy the written description requirement of 35 U.S.C. § 112. See Lindell Decl. Ex. 11.

AACI now argues that statements Schwendimann presented during the interference proceeding serve to limit the scope of the white layer claim term. Specifically, AACI argues that the white layer must melt at ironing temperatures and the melting causes the white layer to encapsulate the ink. Schwendimann responds that her inventions are not limited to melting and

⁵ AACI contends, and Schwendimann does not dispute, that the scope of all of the Schwendimann Patents-in-Suit are impacted by the interference proceeding because they are all in the same family and share the same specification. Capital Mach. Co., Inc. v. Miller Veneers, Inc., 524 Fed. Appx. 664, 648 (Fed. Cir. 2013). Thus, any narrowing statements made during the interference proceeding impact the scope of all the Schwendimann Patents-in-Suit.

mixing at ironing temperatures.⁶

The doctrine of prosecution disclaimer is well established by Supreme Court precedent and precludes patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution of the patent. See Schriber–Schroth Co. v. Cleveland Trust Co., 311 U.S. 211, 220–21 (1940) (“It is a rule of patent construction consistently observed that a claim in a patent as allowed must be read and interpreted with reference to claims that have been cancelled or rejected, and the claims allowed cannot by construction be read to cover what was thus eliminated from the patent.”). An interference proceeding is part of the prosecution history. See Phillips Petroleum Co. v. Huntsman Polymers Corp., 157 F.3d 866, 872 (Fed. Cir. 1998) (“because the interference proceedings are part of the public record and shed light on the meaning of the claims, it is proper to rely on the record of those proceedings in construing the claims”). For prosecution disclaimer to apply, the alleged disavowal of claim scope must be clear and unambiguous. Omega Eng’g, Inc. v. Raytek Corp., 334 F.3d 1314, 1324–25 (Fed. Cir. 2003).

a. Schwendimann did not limit her claims to white layers that melt only at ironing temperatures

Schwendimann did not clearly and unambiguously disclaim the white layer from melting at temperatures higher than ironing temperatures. During the interference proceeding, Schwendimann stressed to the PTAB that AACI’s disclosures lacked written description and enablement support because they did not disclose white backgrounds that melt below 220° C. Lindell Decl. Ex. 12 (“Interference Substantive Mot.”) 1. In making this claim, Schwendimann

⁶ The parties agree that “ironing temperature” is up to 220° C.

distinguished her invention from AACI's, in part, because her disclosures require a white layer that melts at a range of temperatures, including those below 220° C. See id. at 6 (“The [Schwendimann] specification discloses that the whi[te] layer melts at a wide range of temperatures, from 20° C to 300° C.”). Schwendimann’s statements about the temperatures at which her white layers melt were not used to unambiguously disclaim white layers that melt above ironing temperatures, but rather to demonstrate that AACI’s disclosures could not have priority because they did not have written support for white layers melting at ironing temperatures. Schwendimann’s statements do not clearly and unambiguously disclaim white layers melting above 220° C.

b. Schwendimann did disavow white layers that do not melt

Turning next to melting, Schwendimann repeatedly stated during the interference proceeding that her white layers must melt to effect the image transfer. See id. (“The important point, however, is that the white layer must melt and must mix with the other layers in order to effect the image transfer.”); Interference Opp’n Mot. 3 (“Properly construed, the white or opaque layer in the [Schwendimann] involved claims necessarily must melt, and must combine with the other layers of the image transfer sheet.”); 4 (“Thus, the [Schwendimann] claims must be construed to require that the white or opaque layer must melt and must mix with the other layers in order to effect the image transfer.”). Schwendimann’s attempt to backtrack and claim white layers that “melt or are fusible” is unpersuasive because Schwendimann explicitly clarified that the white layer’s “change in viscosity” is “[melting due to application of heat].” Interference Opp’n Mot. 3 (modification in original emphasis added). Schwendimann repeatedly stated to the PTAB that her white layers must melt for her patents to effect the image transfer. This is a clear

and unambiguous disclaimer. Therefore, the “white layer” in the Schwendimann Patents-in-Suit must be construed to require melting of the white layer.

c. Schwendimann represented that her white layers must mix

The parties’ final disagreement over the effect of the interference proceeding relates to mixing. AACI argues that Schwendimann stated in the interference proceeding that her white layers mix when melted and the mixing causes the ink of the indicia to be encapsulated.

Swendimann, although acknowledging that her white layers must mix or combine to some degree with the other layers, disagrees that the white layer in her patents requires encapsulation or complete mixing into a homogenous substance.

In the interference proceeding, Schwendimann repeatedly stated that her white layers “melt and mix” with other layers and that the mixing effected the image transfer. See, e.g., Interference Substantive Mot. 6. Contrary to AACI’s contention, Schwendimann did not limit her claims by qualifying the verb “mix” as requiring encapsulation. In her briefing, Schwendimann recited an embodiment from her specification that discloses encapsulation. Id. However, the purpose of this reference to the Schwendimann specification was to demonstrate that her specification discloses white layers that melt at a wide range of temperatures, not, as AACI argues, that Schwendimann’s white layers must encapsulate the indicia. Id. This is confirmed by that paragraph’s final sentence, “[t]he important point, however, is that the white layer must melt and must mix with the other layers in order to effect the image transfer.” Id. Read in context, as the prosecution history must be, Schwendimann did not clearly and unambiguously disclaim mixing that requires encapsulation. See Computer Docking Station Corp. v. Dell, Inc., 519 F.3d 1366, 1378 (Fed. Cir. 2008) (“Moreover, the prosecution history

must always receive consideration in context.”).

2. Term Construction

AACI does not challenge the beginning portion of Schwendimann’s proposed definition that defines “white layer” as “a layer comprising a concentration or configuration of pigment.” That portion of Schwendimann’s proposed definition will be adopted.⁷

Although AACI does not directly challenge the next portion of Schwendimann’s proposed construction, Schwendimann’s proposal departs slightly from the “white layer” definition provided in the specification. Schwendimann proposes that the “white layer” “provid[es] an opaque background for received indicia.” This is a difference from the specification’s definition of the white layer imparting “a white background on a dark substrate.” ’623 Patent 3:33–34 (emphases added). Although “white” is not necessarily inconsistent with “opaque”—something that is in the color white can also be opaque—the specification provides an explicit definition, therefore it controls. See Johnson Worldwide Assocs., 175 F.3d at 989 (noting that a patentee can be “his or her own lexicographer by clearly setting forth an explicit definition for a claim term”). This construction is also consistent with the claims, which teach that the white layer “provid[es] a substantially non-transparent, opaque background for received and transferred indicia” because the claims recite a property limitation—non-transparent and

⁷ For ease of reference, Schwendimann’s proposed “white layer” definition is “a layer comprising a concentration or configuration of pigment providing an opaque background for received indicia and which further comprises a polymer that melts or is fusible such that it intermingles to some degree with another layer or layers during application.,” while AACI’s proposal is “a distinct polymeric layer of the image transfer sheet/image transfer article positioned between the release layer and image receiving layer that provides a white background for the received image/indicia and that melts and mixes with the other layers at ironing temperatures, causing the white layer polymer to encapsulate the indicia.” Claim Construction Statement at 48–49.

opaque—not the pigment limitation defined in the specification. ’581 Patent 13:24–27.

Schwendimann’s proposal that the white layer “provid[es] an opaque background” is rejected in favor of the language used in the specification.

As stated earlier, the parties’ proposed definitions of “white layer” conflict on whether the entire white layer melts, as AACI contends, or the melting is limited to the polymeric component of the white layer, as Schwendimann proposes. The specification teaches that, as to an embodiment of the invention, “[t]he change in viscosity is confined to the polymeric component that actually contacts the ink or toner or is immediately adjacent to the ink or toner.” ’581 Patent 9:37–44. Since the claims teach that the white layer may be comprised of at least a pigment and a polymer, and the specification teaches that the melting is confined to the white layer’s polymeric component, AACI’s proposed definition is contrary to the teachings of the Schwendimann Patents-in-Suit because it describes melting in a manner that conflicts with an embodiment. Therefore, it is rejected. SanDisk Corp. v. Memorex Prods., Inc., 415 F.3d 1278, 1285 (Fed. Cir. 2005) (“A claim construction that excludes a preferred embodiment is rarely, if ever, correct.”) (internal quotation marks omitted).

Schwendimann next proposes that the white layer “melts or is fusible” while AACI’s submission is confined to “melts.” Schwendimann’s inclusion of “or is fusible” will not be accepted for three reasons. First, as discussed above, during the interference proceeding Schwendimann repeatedly stated that her white layer must melt. Only in a few instances did she use “fuse.” Importantly, when describing what her white layer’s must do to effect the image transfer, Schwendimann used the word “melt.” Second, the specification does not describe white layers that “fuse.” While the specification does not explicitly state that the white layer melts, it

describes different polymeric embodiments and their respective melting points. Third, presuming the specification's limited description of "softening points" creates ambiguity into this claim term, a person of ordinary skill in the art would understand that "fuse" or "fusible" is synonymous with "melt" or "meltable." Macosko Decl. [Docket No. 276] ¶ 29. Since adding "or is fusible" is not needed to further the claim term's definition, it is excluded. See Vivid Techs. Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999) ("[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy."). To be consistent with her statements during the interference proceeding, "or is fusible" will not be adopted in the definition.

AACI next proposes inclusion of the word "mix." Schwendimann prefers "intermingles to some degree." Schwendimann's proposal, however, is inconsistent with statements made during the interference proceeding and is unsupported by the specification. Again, during the interference proceeding Schwendimann stated that her white layer mixes. She did not use the word "intermingles" or state that the white layer mixes "to some degree." AACI's proposal fairly reflects Schwendimann's statements made in the interference proceeding.

AACI next proposes that the melting and mixing occurs "at ironing temperatures." As discussed above, however, Schwendimann did not represent in the interference proceeding that her white layers cannot mix above ironing temperatures. In addition, the specification explicitly discloses white layers with melting points above 220° C. See '623 Patent 7:16–17 ("The LDPE polymer of the image imparting layer melts a point within a range of 43°–300° C."). Thus, restricting Schwendimann's white layer to melting at ironing temperatures imposes a limitation that is unsupported by the intrinsic record.

Finally, AACI concludes its proposed definition of “white layer” with the requirement that the mixing “caus[es] the white layer polymer to encapsulate the indicia.” As discussed above, Schwendimann’s statements in the interference proceeding are not so clear and unambiguous to require encapsulation. This portion of AACI’s proposed definition is rejected.

Therefore, “white layer” will be construed to mean “a layer comprising a concentration or configuration of pigment providing a white background for received indicia and which further comprises a polymer that melts and mixes with another layer or layers during application.”

3. Other Claim Terms Synonymous with White Layer

AACI identifies 13 other claim terms that it argues must be defined in a manner that incorporates the melting and mixing limitation from the white layer definition. As support for its argument, AACI cites Schwendimann’s statement at the interference proceeding that all of her claims require both a white layer and an image receiving layer that contains the image or indicia to be transferred. AACI contends that based on Schwendimann’s representations in the interference proceeding, these two layers must be present in each claim. AACI further contends that both the white layer and the other layer—the image receiving layer—must melt and mix. Schwendimann asserts two arguments in response. First, Schwendimann argues that the terms AACI identifies as incorporating or interacting with the white layer do not need to be construed because they are not in controversy. Second, if a construction is warranted, Schwendimann disagrees with AACI’s contention that each of the terms must include the white layer’s melting and mixing limitation.

During the interference proceeding, Schwendimann stated that her patents “describe a white layer that acts as a white background on the dark base” and “[e]ach of the

[Schwendimann] claims requires such a white background for receiving the image.” Interference Opp’n Mot. 2–3. Schwendimann provided a chart that identifies the “‘white layer’ limitation” for every claim involved in the interference proceeding. Id. at 3. Additionally, Schwendimann stated, “[p]roperly construed, the white or opaque layer in the [Schwendimann] involved claims necessarily must melt, and must combine with the other layers of the image transfer sheet.” Id. These statements are clear and unambiguous evidence of disclaimer, and thus Schwendimann is foreclosed from arguing that the melt and mix limitation is not required in her claims. See e.g., Rydex Techs., LLC v. Baxter Int’l, Inc., Nos. 13-666, 13-665, 13-667, 13-668, 2015 WL 2345633, at *4 (D. Del. May 15, 2015) (noting that because the plaintiff represented during prosecution that three critical elements existed in every claim, the plaintiff was foreclosed from arguing at claim construction that one of the critical elements was not included in a claim). Therefore, each of Schwendimann’s asserted claims requires a definition that includes the melt and mix limitation of the white layer term.

However, Schwendimann did not state during the interference proceeding that an additional layer must also melt and mix upon application of heat. To the contrary, Schwendimann repeatedly stated that the “white or opaque layer” must melt and mix. Interference Opp’n Mot. 3. Although Schwendimann represented that when the white or opaque layer melts it mixes with other layers, she has not stated that any other layers must also melt. AACI’s argument that Schwendimann represented that another layer—what AACI refers to as the “image receiving layer” and its equivalents—melts does not find support in the interference proceeding record. Merely because the white layer melts and mixes with other layers does not necessarily mean that those other layers must also melt.

a. White layer claims that are not in controversy and which require no construction

Of the 13 claim terms AACI identifies that are synonymous, incorporate, or interact with the white layer, Schwendimann argues that eight are not in controversy and therefore do not require construction. AACI disagrees and argues that every claim term that includes the melt and mix limitation of the white layer is a basis for its noninfringement position. Thus, argues AACI, claim terms that are synonymous with, incorporate, or interact with the white layer are in controversy and in need of construction.

i. “Article for imparting/transferring an image,” “transfer article,” and “image transfer sheet”

AACI proposes that “article for imparting/transferring an image,” “transfer article,” and “image transfer sheet” should be construed as “a sheet or article including a removable substrate and one or more discreet polymeric layers, including a white/opaque layer, on the removable substrate that receive an image and that melt and mix together at ironing temperatures, causing the white layer polymer to encapsulate the indicia.” Schwendimann argues that “article for imparting/transferring an image,” “transfer article,” and “image transfer sheet” are non-technical terms that do not require construction.

AACI’s noninfringement claim charts do not assert constructions of “article for imparting/transferring an image” and “image transfer article” as a basis for noninfringement. Moreover, AACI admits that its accused products are “image transfer sheets.” See Lindell Decl. Ex. 16 (“Noninfringement Claim Chart”) Ex. B 25 (“AACI 888 product is an image transfer sheet”); Ex. A 26 (“AACI 889 product is an image transfer sheet”). In addition, these two claim terms appear in claims that also include other terms AACI alleges are synonymous with,

incorporate, or interact with the white layer. See e.g., '475 Patent 11:34–41 (Claim 1 of the '475 Patent claims “[a]n ink-jet transfer article” that is comprised of, among other things, “an opaque first layer”). Therefore, construing these terms is unnecessary. Vivid Techs., 200 F.3d at 803.⁸

With respect to “image transfer sheet,” AACI admits its accused products are “image transfer sheets.” See Noninfringement Claim Chart Ex. A 26 (“AACI 889 product is an image transfer sheet”); Ex. B (“AACI 888 product is an image transfer sheet”). This term is not in dispute and will not be construed. Vivid Techs. Inc., 200 F.3d at 803.

ii. “indicia-receptive layer,” “ink receptive layer,” and “ink-receptive portion”

AACI proposes that “indicia-receptive layer,” “ink receptive layer,” and “ink-receptive portion” should be construed as “a distinct polymeric layer that receives an image/indicia such as ink to be transferred and that melts and mixes with other layers at ironing temperatures, causing the white/opaque layer polymer to encapsulate the indicia.” Schwendimann argues that “indicia-receptive layer,” “ink receptive layer,” and “ink-receptive portion” are not in controversy.

In the Noninfringement Claim Chart, AACI states that the “indicia receptive layer” and the “ink receptive portion” are not defined in the specification. Noninfringement Claim Chart Ex. B 8, 27. AACI does admit, however, that its products include an “ink receptive layer.” Id. Thus, because AACI proposes the same definition for “ink-receptive layer” as it does for the

⁸ Claim construction is also essential for determining patent validity. State Contracting & Eng'g Corp. v. Condotte Am., Inc., 346 F.3d 1057, 1068 (Fed. Cir. 2003). While AACI has counterclaimed for invalidity, the melting and mixing limitation AACI argues must be present in each claim is incorporated in a different claim term located within the same claim. Put another way, since the “article for imparting/transferring an image” or “transfer article” is the overarching concept being disclosed, if those disclosures are comprised of something that melts and mixes, it necessarily means the thing itself possesses that limitation.

“indicia-receptive layer” and the “ink receptive portion,” these claim terms will be considered together.

AACI’s noninfringement chart reflects that AACI’s basis for noninfringement is not the composition or property of the “ink-receptive layer” itself, but rather the position that layer has in relation to the other layers or parts in the accused products. See id. at 30 (“The AACI 888 product includes an ink receptive layer, but that layer is not overlaid onto either a polymer or resin layer containing a white pigment or titanium oxide.”). That AACI also argues for construction of the term “overlaid” confirms AACI’s noninfringement position is directed to the location of the “ink-receptive layer” and what it touches rather than the composition of the “ink-receptive layer” itself. For this reason, “ink-receptive layer,” “indicia-receptive layer,” and “ink receptive portion” are not in controversy and will not be construed.

b. White layer claims that are in controversy and which require construction

i. “Image-imparting member”

“Image-imparting member” appears in claims 1, 2, 3, 9, 11, 12, and 15 of the ’581 Patent, claims 10, 12, 15, 16, 18, 19, and 20 of the ’042 Patent, and claim 1 of the ’256 Patent.⁹

Schwendimann proposes a definition of “layer or layers that include at least one surface configured to receive and carry indicia to be transferred and include at least one portion comprising a concentration or configuration of pigment providing an opaque background for received indicia.” AACI submits that the “image-imparting member” is “one or more polymeric layer(s) that receive(s) an image to be transferred, including at least one layer comprising a

⁹ Only claims 1 and 9 of the ’581 Patent are asserted as a basis for infringement.

concentration or configuration of pigment providing an opaque background for received indicia that melt(s) and mix(es) together at ironing temperatures, causing the white/opaque layer polymer to encapsulate the indicia.”

Claim 1 of the '581 Patent recites

An image transfer article, comprising:

an image-imparting member, including at least one surface configured to receive and carry indicia to be transferred and including at least one portion comprising a concentration or configuration of pigment providing an opaque background for received indicia, the opaque background having a substantially non-transparent effect allowing the received indicia to be visible when transferred to a dark-colored base; and
a removable substrate disposed adjacent, and underlaying, the image-imparting member, the removable substrate including a coating comprising at least one of silicone, clay, resin, fluorocarbon, urethane, or an acrylic base polymer.

'581 Patent 11:35–48. Claim 9, dependent on claim 1, recites:

The article of claim 1, wherein the image-imparting member comprises a first polymer configured to receive and carry the indicia and at least a second polymer including the pigment providing the opaque background.

Id. 12:10–13.

The crux of the parties' dispute is whether the “image-imparting member” must be defined to include the melt and mix limitation of the white layer. As Schwendimann stated in the interference proceeding, “each of the [Schwendimann] involved claims requires such a white background for receiving the image” and “[p]roperly construed, the white or opaque layer in the [Schwendimann] involved claims necessarily must melt, and must combine with the other layers of the image transfer sheet.” Interference Opp'n Mot. 3. Claim 1 of the '581 Patent therefore must possess a claim term that melts and mixes with other layers.

Claim 1 discloses an image transfer article that is comprised of two separate elements, the

image-imparting member and a removable substrate. See '581 Patent 35–48. Claim 1 teaches that the image-imparting member is the claim element that possesses the pigment for imparting the opaque background. Since Schwendimann represented in the interference proceeding that the white layer limitation in claim 1 of the '581 is the term that comprises “a concentration or configuration of pigment providing an opaque background,” the image-imparting member must be defined to include the melting and mixing limitation of the white layer. Interference Opp'n Mot. 3.

The parties also dispute whether the image-imparting member is comprised of a “layer” or a “portion” of a layer that possesses the concentration or configuration of pigment. Although the claims use the word “portion,” AACI contends that the figures in the Schwendimann Patents-in-Suit show the pigment permeated throughout the entire layer in which the pigment is contained. Thus, argues AACI, the entire layer contains the pigment rather than merely a portion of the layer.

Figure 5 is dispositive of this issue. Figure 5 discloses an image transfer sheet comprised of five separate layers: a peel layer, a receiving layer, a white layer, a release layer, and a substrate layer. '581 Patent Fig. 5; 8:42–57; 9:1–2. The white layer, as correctly characterized by AACI, is comprised of titanium oxide or other white pigment. Id. 8:55–57. However, the white layer is also designated as part of the peel layer and the release layer. Id. Fig. 5. Figure 5 thus supports Schwendimann's position that only a section of a layer may contain the white pigment because both the peel layer and the release layer are complete layers that have the pigment located in only a portion of, rather than throughout, the layer.

Since the parties' remaining definitions are generally in agreement, “Image-imparting

member” is construed to mean: “layer or layers that include at least one surface configured to receive and carry indicia to be transferred and include at least one portion comprising a concentration or configuration of pigment providing an opaque background for received indicia that melts and mixes.”

ii. “Opaque first layer”

“Opaque first layer” appears in claims 1, 2, 6, 10 12, 19, and 20 of the ’475 Patent and in claims 8 and 10 of the ’748 Patent.¹⁰ Schwendimann proposes that “opaque first layer” is a “layer containing white or luminescent pigment.” Claim Construction Statement 31. AACI argues that “opaque first layer” should be construed with an near identical definition of white layer: “a distinct polymeric layer of the image transfer sheet/transfer article positioned between the release layer and image receiving layer that provides an opaque background for the received image/indicia and that melts and mixes with the other layers at ironing temperatures, causing the opaque layer polymer to encapsulate the indicia.” *Id.* at 48. Claim 1 of the ’475 Patent recites:

An ink-jet transfer article, comprising:
 a substrate member including a substrate surface;
 an opaque first layer overlaying the substrate surface, the opaque first layer
 including polyurethane and a white or luminescent pigment; and
 a second layer overlaying the opaque first layer and configured to receive indicia,
 the second layer including polyurethane and a polymeric material.

’475 Patent 11:34–41.

Schwendimann’s proposed definition is at odds with her statements made in the interference proceeding, where she represented that the opaque first layer is the white layer limitation for claims 1, 2 and 6 of the ’475 Patent. Lindell Decl. Ex. 13 at 3. Thus, “opaque first

¹⁰ Claims 1, 2, and 6 of the ’475 Patent are asserted as a basis for infringement.

layer” must be construed to give effect to Schwendimann’s disclaimer that the “white or opaque layer . . . necessarily must melt, and must combine with the other layers of the image transfer sheet.” Id. (emphasis added). Moreover, the claims teach that the “opaque first layer” is comprised of at least two things, a polymer and a pigment. See ’475 Patent 11:36–38 (“the opaque first layer including polyurethane and a white or luminescent pigment”); 7:42–45 (noting that polyurethane is a polymer). Thus, not only did Schwendimann equate the opaque layer with the white layer in the interference proceeding, the claims teach that they are compositionally similar. “Opaque first layer” must thus be construed to mean “a layer comprising a concentration or configuration of pigment providing an opaque background for received indicia and which further comprises a polymer that melts and mixes with another layer or layers during application.”

iii. “Opaque background”

“Opaque background” is a frequently used term in the Schwendimann Patents-in-Suit and appears in 10 claims in the ’581 Patent, seven claims in the ’042 Patent, six claims in the ’554 Patent, and in claim 1 of the ’748 Patent. Claim Construction Statement 31.¹¹ Schwendimann asserts that “opaque background” is not in controversy. If it is and requires construction, Schwendimann argues that “opaque background” should be accorded its plain and ordinary meaning. AACI contends that the term is in controversy and argues that “opaque background” should be given the same construction as the term “substantially white background” that is: “background created by pigment within the opaque layer polymer that

¹¹ The asserted claims that include the “opaque background” claim term are claims 1, 9, 27, and 31 of the ’581 Patent, claim 1 of the ’042 Patent, and claims 6, 9, and 12 of the ’554 Patent.

melts and mixes with the image receiving layer at ironing temperatures, causing the opaque layer polymer to encapsulate the indicia.” Id. at 42.

Schwendimann’s argument that “opaque background” is not in controversy is belied by her disclaimer in the interference proceeding that all of her claims require a white background that melts and mixes. See Interference Opp’n Mot. 3. Since the basis of AACI’s noninfringement position is that the white layer in its accused products does not melt and mix and that the “opaque background” term must be defined to include the melting and mixing limitation of the white layer, “opaque background” is in controversy and needs to be construed.

As discussed above, since the white layer is comprised of both a pigment and a polymer and the melting and mixing limitation is confined to the polymeric component of the white layer, the pigment component of the white layer does not necessarily melt. Although Schwendimann represented in the interference proceeding that the white layer limitation is provided by the opaque background, she represented that it is the “pigment” of the “white layer” that provides the “opaque background.” Id. Since the pigment portion of the white layer does not necessarily melt, it would be inconsistent to construe the opaque background in a manner that requires melting. The Court agrees with Schwendimann that “opaque background” should be afforded its plain and ordinary meaning.

iv. “Release layer”

“Release layer” appears in claims 1, 6, 15, and 16 of the ’623 Patent.¹² Schwendimann argues that “release layer” means “layer or layers overlaying the base paper, includes titanium oxide or other white or luminescent pigment, and may include a release coating.” Claim

¹² Only claim 6 is asserted as a basis for infringement.

Construction Statement 38. AACI counters that “release layer” means “a distinct polymeric layer of the image transfer sheet contacting the image transfer substrate that melts and mixes with the image imparting layer/polymer layer at ironing temperatures, causing the polymeric layer to encapsulate the indicia.” Id. Claim 6 of the ’623 Patent recites:

An image transfer sheet, comprising:
 a colored, substrate comprising woven, fabric based material, or paper;
 a release layer overlaying the substrate, wherein the release layer is impregnated
 with titanium oxide or other white pigment or luminescent pigment; and
 a polymer layer.

’623 Patent 12:20–26.

Schwendimann first takes issue with AACI construing the “release layer” to include the melt and mix limitation. However, Schwendimann represented in the interference proceeding that the “‘white layer’ limitation” of the ’623 Patent is the “white pigment or luminescent pigment.” Interference Opp’n Mot. 3. Since the claims teach that the release layer is impregnated with a white or luminescent pigment, the definition of “release layer” must include the melt and mix limitation Schwendimann represented during the interference proceeding.¹³

Schwendimann next disagrees with AACI’s proposed construction in that it limits the “release layer” to being “a distinct polymeric layer.” As Schwendimann correctly argues, the specification identifies a preferred embodiment in which the “release layer” is comprised of both a silicone coating and a white layer. ’623 Patent 8:52–54. In the accompanying figure, the ’623 Patent shows the “release layer” as having two discrete components, a “white layer” and a “silicone coating.” ’623 Patent Fig. 5. The specification teaches that the “silicone coating” is

¹³ Schwendimann, while disagreeing that “release layer” must melt and mix, agrees that the specification describes the “release layer” as being comprised of a “white layer.” Pl.’s Principal Claim Construction Mem. [Docket No. 277] 20.

one type of “release coating” and that “fluorocarbon, urethane, or acrylic base polymer” are other release coatings. Id. 4:3–6. While the silicone coating and the other release coatings identified in the specification are polymers, the pigment in the white layer is not. In addition, although the specification does explicitly demark the uniqueness between the release coating and the white layer by classifying the release coating as an independent “layer,” the specification demonstrates compositional separation between the discrete parts that comprise the release layer. For these reasons, AACI’s suggested definition that the “release layer” is a “distinct polymeric layer” is rejected.

Finally, Schwendimann contests AACI’s proposed definition that requires the “release layer” to be in contact with the “image transfer substrate.” As explained in further detail below, “overlying” as used in claim 6, does not require direct contact. Because of this, AACI’s definition requiring contact between the “release layer” and the “image transfer substrate” is flawed and also is rejected.

In sum, “release layer” can be made of one or multiple layers. It must overlay the base substrate and is comprised of a white layer and may include a release coating. “Release layer” will therefore be construed as “layer or layers overlaying the base substrate comprised of at least a white layer and may include a release coating.”

ii. Colored Substrate

The term “colored substrate” appears in claims 1 and 6 of the ’623 Patent.¹⁴ Schwendimann submits that “colored substrate” is “woven, fabric based material, or paper, having color.” Claim Construction Statement 4. AACI proposes a definition of “a dark-colored

¹⁴ Only claim 1 is asserted as a basis for infringement.

article that the image is transferred to, such as a dark t-shirt.” Id. The parties’ disagreement centers on two points. First, the parties dispute whether “colored substrate” is limited to just the final article that receives the transferred image. Second, the parties disagree on whether the colored substrate can be white.

The ’623 Patent is entitled “Method of Image Transfer on a Colored Base.” In describing the background of the invention, the ’623 Patent states that “[t]he present invention relates to a method for transferring an image onto a colored base and to an article comprising a dark base and an image with a light background on the base.” ’623 Patent 1:13–15. The specification further recites:

the term ‘base’ or substrate refers to an article that receives an image of the image transfer device of the present invention. The base includes woven or fabric-based materials. The base includes articles of clothing such as T-shirts, as well as towels, curtains, and other fabric-based or woven articles.

Id. 3:19–25. Thus, the Patent explicitly identifies the “substrate” as “an article that receives an image of the image transfer device of the present invention.”

The claims and the specification also state that a “substrate layer” or a “colored substrate” can be part of an image transfer sheet. See id. at Fig. 5. Contrary to AACI’s contention, the provided definition of “substrate” does not preclude “substrate” from being something other than the final receiving article, such as a T-shirt. While “base” includes things such as a T-shirt, towels, and curtains, “substrate” is not described in this manner. Figure 5 illustrates this point. In Figure 5, the image transfer sheet is comprised of a “peel layer,” which itself is comprised of a “receiving layer” and a “white layer.” An additional component of the image transfer sheet is a “release layer,” which itself is comprised of a “white layer” and “silicone coating.” Completing the composition of the image transfer sheet is a “substrate

layer.” This is explicitly claimed in claim 6. *Id.* 12:20–26. Since “substrate” in “substrate layer” is understood differently than base, these two terms are not interchangeable, thus “colored substrate” is not necessarily restricted to the article to which the image is transferred.

Turning next to the second point of dispute, Schwendimann’s proposed definition fails to account for the significance of “colored” in “colored substrate.” See Merck & Co., Inc. v. Teva Pharmaceuticals USA, Inc., 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”).

Essentially, Schwendimann’s proposed construction is that the material can be black, white, or any shade between the two. The claims would accomplish this breadth, however, if they merely recited “substrate” or “base” rather than “colored substrate” or “colored base.” By claiming the word “colored,” which modifies “substrate,” the ’623 Patent teaches that “colored substrate” is narrower than Schwendimann’s proposal. For this reason, Schwendimann’s proposed definition is rejected. AACI’s proposal is also incorrect for a different reason. While the Court generally agrees with AACI that “colored substrate” is narrower than Schwendimann proposes, AACI’s proposal is erroneous because it impermissibly equates “colored” with “dark.” Although the Schwendimann Patents-in-Suit were designed to improve the visibility of images transferred to dark colored bases by adding a light colored background, there is no explicit or implicit requirement that the substrate must be dark.

For these reasons, both Schwendimann and AACI’s proposed definitions of “colored substrate” are rejected. “Colored substrate” will be accorded its plain and ordinary meaning.

iii. Overlaying; Overlaid

“Overlaying” or “Overlaid” appears in the following claims: claim 6 of the ’623 Patent;

claim 24 of the '581 Patent; claims 1, 2, 10, and 12 of the '042 Patent; claim 13 of the '475 Patent; claims 9, 10, 11, and 12 of the '554 Patent; and claims 1, 8, 11, and 19 '748 Patent.¹⁵

Schwendimann submits these terms mean “laying over or upon, is not limited to contacting.”

Claim Construction Statement 32. AACI challenges Schwendimann’s proffered definition on whether overlaying and overlaid must be construed to include contact. AACI’s proposed definition for these terms is “placing[ed] on top of and in contact with.” Id.

The Schwendimann Patents-in-Suit describe the invention as “an image transfer sheet” comprised of layers. See, e.g., '623 Patent. The claims teach that overlaying and overlaid can, but do not necessarily, include contact. For example, claim 1 of the '748 Patent recites “one or more layers overlaying the release-enhancing coating.” '748 Patent 11:36–37. In that claim, “overlaying” does not include contact because multiple layers over or on top of the “release-enhancing coating” cannot each be contacting the “release-enhancing coating.” If AACI’s proposed definition is adopted, overlaying here would mean that multiple layers, the “or more layers” portion, would each be simultaneously contacting the “release-enhancing coating,” a result that is not supported by the plain language of the claims or the specification. Moreover, Schwendimann’s definition is not contradicted by the file history. While Schwendimann does distinguish her invention from prior art in part because the “release layer contacts the image transfer substrate,” this statement is consistent with Schwendimann’s usage of “overlaying” and “overlaid” in that it can mean contacting. Niederluecke Decl. [Docket No. 275] Ex. J at 4.

Schwendimann’s definition of “overlaying” and “overlaid” is consistent with the claims,

¹⁵ All of the listed claims are asserted as a basis for infringement except claims 10 and 12 of the '042 Patent, claims 10 and 11 of the '554 Patent, and the four claims in the '748 Patent.

the specification, and the file history. “Overlaying” and “overlaid” therefore are construed to mean “laying over or upon, is not limited to contacting.”

iv. Underlaying

“Underlaying” is found in claims 1, 27, and 30 of the ’581 Patent and in claim 12 of the ’554 Patent.¹⁶ Schwendimann submits this term means “lying or situated under, is not limited to contacting.” AACI submits “underlaying” is “placing below and in contact with.” The parties’ dispute mirrors their disagreement regarding “overlaying.”

AACI’s definition is not supported by the claim language. As discussed above, “underlaying” does not require contact. Schwendimann’s definition will be adopted. “Underlaying” means “lying or situated under, is not limited to contacting.”

v. Contacting/contactable

“Contacting” or “contactable” appears in claim 1 of the ’623 Patent, claim 16 of the ’042 Patent, claim 6 of the ’554 Patent, claim 3 of the ’581 Patent, and claim 8 of the ’748 Patent.¹⁷ Schwendimann argues these terms should be accorded their plain and ordinary meaning while AACI believes that “contacting” is “touching” and “contactable” is “touchable.” Claim Construction Statement 7. While AACI’s proposal nearly mirrors the claim term, AACI argues that its definition is necessary because Schwendimann has indicated that she intends to argue that claim components can meet the contracting limitation absent direct touch through “indirect” contact.

¹⁶ With the exception of 30 of the ’581 Patent, each of the listed claims is asserted as a basis for infringement.

¹⁷ Only claim 6 of the ’554 Patent is asserted as a basis for infringement.

Construction of this term is unnecessary because there is no significant difference between the claim term and the synonym AACI proposes for a definition. “Contacting” and “contactable” will be accorded their plain and ordinary meaning.

vi. Disposed between

“Disposed between” appears in claim 17 of the ’581 Patent and in claims 2 and 24 of the ’748 Patent.¹⁸ Schwendimann argues that this term should be given its ordinary meaning. AACI argues for “placed next to and between.” Claim Construction Statement 9.

“Disposed between” will not be construed. AACI’s proposed definition fails because the ’581 Patent requires the layer or component that is “disposed between” to be both “next to” and “between.” As Schwendimann argues, the term “disposed adjacent,” recited in claim 1 of the ’581 Patent, describes the spatial relationship between the subjects that AACI contemplates in its definition for “disposed between;” “next to” and “between.” Because “disposed between” must have a different meaning than “disposed adjacent,” AACI’s definition is rejected. See Karlin Tech., Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 971–72 (Fed. Cir. 1999) (“different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope”).

vii. Surface configured to receive and carry indicia

In the Claim Construction Statement, the parties agree that “surface configured to receive and carry indicia” should be given its plain and ordinary meaning.

viii. Combining

The term “combining” appears in claims 1, 5, 8, 10, and 15 of the ’042 Patent and in

¹⁸ Only claim 17 of the ’581 Patent is asserted as a basis for infringement.

claims 9 and 12 of the '554 Patent.¹⁹ Schwendimann argues that this term is not in controversy and does not need to be construed. AACI proposes “mixing” as a definition.

AACI’s noninfringement position with respect to claim 12 of the '554 Patent is, in part, that “[n]either the hot melt polymer nor the polyurethane ink receptive layer are combined with a white pigment. . . .” Lindell Ex. 16 Ex. B p. 30. Since the basis of AACI’s noninfringement position is that its accused products do not “combine” as contemplated by Schwendimann’s Patents-in-Suit, the claim term is in controversy.

As described by the '042 and '554 Patents, the “opaque background” is created by “combining” a “pigment” with a separate layer or compound. '554 Patent 12:45–47. However, the '042 Patent, in claim 8 dependent on claim 1, recites a method “wherein combining at least one of the one or more polymer layers with the pigment includes mixing the one or more polymer layers with one or more of talc, barium, aluminum hydrate. . . .” '042 Patent 12:13–16 (emphasis added). The specification teaches that “talc, or barium or aluminum hydrate” are specific embodiments of the “other white pigments.” *Id.* 4:14–20. AACI’s proposed construction must therefore be rejected because it would assign the same meaning for two claim terms in separate claims. See *Nystrom v. TREX Co., Inc.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005) (“When different words or phrases are used in separate claims, a difference in meaning is presumed.”). “Combining” will not be construed and will be given its plain and ordinary meaning.

¹⁹ Only claim 1 of the '042 Patent and claims 9 and 12 of the '554 Patent are asserted as a basis for infringement.

ix. “Impregnated”

The term “impregnated” appears in claims 1, 4 and 6 of the ’623 Patent.²⁰

Schwendimann argues that this term is not in controversy and does not need to be construed.

AACI proposes “permeated throughout” as a definition. Claim 6 recites “a release layer overlaying the substrate, wherein the release layer is impregnated with titanium oxide or other white pigment or luminescent pigment.” ’623 Patent 12:23–25.

AACI states in its noninfringement chart that “[t]he silicone coating of the 888 product is NOT impregnated with any white pigment. The silicone coating is not an ‘equivalent’ of the impregnated release layer because it is not impregnated with pigment. . . .” Noninfringement Claim Chart Ex. B 3. The term “impregnated” is thus in controversy.

AACI’s proposed construction of “impregnated” excludes a preferred embodiment. Claim 6 discloses a “release layer” that is “impregnated” with pigment. The specification teaches, and this Order construes, that the “release layer” may be comprised of multiple layers. The specification describes a preferred embodiment of the release layer wherein the white layer is impregnated with the pigment. ’623 Patent 8:48–63. In this embodiment, the release layer is comprised of a white layer and a silicone coating. *Id.* Since the specification teaches that only a certain portion of the release layer may be impregnated with the pigment, construing “impregnated” to mean “permeated throughout” would require claim 6 to exclude the embodiment disclosed in the specification. Since “[a] claim construction that excludes a preferred embodiment is rarely, if ever, correct,” AACI’s proposed definition is rejected. SanDisk Corp., 415 F.3d at 1285 (internal quotation marks omitted). “Impregnated” will not be

²⁰ Only claim 6 is asserted as a basis for infringement.

construed and will be given its plain and ordinary meaning.

x. “Layer”

The term “layer” appears throughout the Schwendimann Patents-in-Suit. Schwendimann contends that the term is not in controversy and does not need to be construed. AACI argues that “layer” should be defined as “a single thickness of material of substantially uniform chemical composition.” Claim Construction Statement 24.

AACI’s proposed definition conflicts with the teachings of the claims and the specification and will not be adopted. Since AACI’s proposed definition requires “substantially uniform chemical composition,” it is at odds with Schwendimann’s disclosure of layers that are themselves comprised of multiple layers. See, e.g., ’623 Patent Fig. 5 (showing a “peel layer” that is comprised of a “receiving layer” and a “white layer”); 6:59–63 (noting that “an image imparting layer” is comprised of more than one individual layer).²¹ “Layer” will not be construed and will instead be given its plain and ordinary meaning.

xi. “Mix; mixed, mixture”

These terms appear in two claims each of the ’623, ’581, ’042, and ’748 Patents.²² Schwendimann contends that the terms are not in controversy and do not need to be construed. AACI proposes “mix” should be construed as “blend(ed) into one mass or mixture of

²¹ AACI resists Schwendimann’s contention that one layer can be comprised of multiple layers by arguing that Schwendimann improperly amended the ’311 Patent to add new matter to the ’623 Patent in response to deposition testimony that occurred in a prior lawsuit Schwendimann filed against AACI’s predecessor. See Answer & Countercl. ¶¶ 10–41. Because AACI’s contention is directed exclusively at the composition of the “release layer,” it does not serve as a basis to limit the scope of the term “layer” in the manner advanced by AACI.

²² Only claim 9 of the ’623 Patent and claim 29 of the ’581 Patent are asserted as a basis for infringement. Only “mix” and “mixture” appear in the asserted claims.

substantially uniform composition,” and “mixture” should mean “a substantially uniform composition of two or more substances that are blended together.” Claim Construction Statement 26.

In its noninfringement chart, AACI claims that the “polymer layer of the 888 product does not mix with the white layer when heat is applied.” Noninfringement Claim Chart Ex. B 10. Because the definition of “mix” impacts infringement, the term is in controversy.

AACI’s proposal revisits Schwendimann’s proposed definition of “white layer,” where she requested a definition that the polymer “melts or is fusible such that it intermingles to some degree.” Claim Construction Statement 48. As concluded above, however, Schwendimann’s “intermingles to some degree” language was rejected in favor of “mix.” On the other hand, AACI’s suggested definition is unsupported by the record. Nothing in the claims, specification, or file history demands that mixing result in a composition that is “substantially uniform.” These terms will not be construed and will instead be given their plain and ordinary meaning.

xii. “Obtaining”

The term “obtaining” appears in claims 1, 10, 11, and 16 of the ’042 Patent and claims 1, 9 and 12 of the ’554 Patent.²³ Schwendimann contends that the term is not in controversy and therefore does not need to be construed. AACI proposes a definition of “acquiring from another, rather than making.” Claim Construction Statement 30.

The ’554 Patent discloses a method for transferring an image on a dark colored T-shirt by use of an image transfer sheet. ’554 Patent 11:21–29. The claims teach that the image transfer

²³ Only claim 1 of the ’042 Patent and claims 9 and 12 of the ’554 Patent are asserted as a basis for infringement.

sheet is comprised of multiple layers. The specification teaches that those layers may be composed of an array of compounds. See, e.g., id. 7:20–31 (noting polymers useable in the image imparting layer). Put simply, the specification teaches how someone skilled in the art can make an image transfer sheet. AACI’s definition runs contrary to this disclosure and it will not be accepted. “Obtaining” will be given its plain and ordinary meaning.

xiii. “Release coating”

“Release coating” appears in claims 17, 19, and 24 of the ’581 Patent, claim 11 of the ’475 Patent, and claims 1 and 5 of the ’554 Patent.²⁴ Schwendimann does not believe “release coating” is a claim in controversy. If a construction is required, Schwendimann proposes “coating including at least one of silicone, clay, resin, fluorocarbon, urethane, or acrylic base polymer, may include titanium oxide or other white or luminescent pigment.” Claim Construction Statement 35. AACI proposes “a coating applied to the image transfer substrate/base that helps remove the image transfer substrate from the adjacent layer of the image transfer sheet/image transfer article.” Id.

AACI admits that its products have a silicone release layer. Noninfringement Claim Chart Ex. A 10; Ex. B 8–9. Since AACI has not proffered a position of noninfringement of the ’581 Patent that involves the term “release coating,” it will not be construed. Vivid Techs., Inc., 200 F.3d at 803.

xiv. Order of method steps

AACI argues that the Court should construe the Schwendimann Patents-in-Suit method claims to require performance in the order they are recited in the claims. The basis for AACI’s

²⁴ Only claims 17 and 24 of the ’581 Patent are asserted as a basis for infringement.

argument is its contention that creating the item disclosed by the method claims can only be accomplished if the claims are performed in the exact order they are recited. Schwendimann responds that AACI's contention is incorrect; the steps of the method claims can readily be performed in a different order than they are recited in the patent.²⁵

“Unless the steps of a method actually recite an order, the steps are not ordinarily construed to require one.” Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323, 1342–43 (Fed. Cir. 2001). A specific order of performance may be required, however, when the process implicitly requires that the steps be performed in the recited order. Id. Determining whether the claim requires a specific order is a two-part test. Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1369 (Fed. Cir. 2003). The first inquiry looks “to the claim language to determine if, as a matter of logic or grammar, they must be performed in the order written.” Id. If not, attention is next directed “to the rest of the specification to determine whether it ‘directly or implicitly requires such a narrow construction.’” Id. (quoting Interactive Gift, 256 F.3d at 1343) (emphasis in original).

The relevant portion of claim 12 of the '554 Patent recites:

A method for making an image transfer sheet, comprising:
 obtaining a coated substrate;
 overlaying the coated substrate with a polymer;
 overlaying or underlaying the polymer with a resin layer;

²⁵ Schwendimann also argues that AACI's request to construe the method claims to require a definite sequence is untimely. Since the challenge at issue here is to the order of method steps and not the construction of a claim term, AACI was not required to disclose this issue as part of its contested claim terms. In addition, AACI previously raised this issue in opposition to Schwendimann's motion for Partial Summary Judgment [Docket No. 177] over two years ago, defeating any claim from Schwendimann that she was somehow blindsided by AACI's request. Schwendimann is not prejudiced by the timing of this issue which has been fully briefed.

combining at least one of the polymer or the resin layer with a titanium oxide or other white pigment, thereby forming an opaque background; and overlaying the polymer and the resin layer with an ink receptive layer.

'554 Patent 12:40–49.

The steps of claim 12 disclose how to create an image transfer sheet. Logic or grammar, however, does not require the steps to be performed in the precise order in which they are recited. Indeed, a person making an image transfer sheet could first underlay the polymer with a resin layer (step three) before overlaying the coated substrate with a polymer (step 2). Moreover, the specification discloses that titanium oxide or other white pigment is combined with the polymer before it is applied. See '554 Patent 8:10–15 (“The polymeric solution is pigmented with up to about 50%, with a material such as titanium oxide or other pigment, or without plasticizers and is applied by conventional coating methods”). Neither the claims nor the specification requires that the method steps be performed in the order in which they are recited.

xv. “Melts”

“Melts” was not identified in the parties Claim Construction Statement as a disputed term to be construed. AACI nonetheless argues that “melt” with respect to white layer and related terms needs construction to prevent Schwendimann from arguing to the jury that melting can mean something other than its ordinary meaning. AACI proposes that “melt” means “change from a solid to liquid by heat.” Schwendimann argues that the term is not in controversy.

In its Noninfringement Claim Charts, AACI contends that its accused products do not infringe because AACI’s white pigment does not melt nor mix with the other layers. Although not identified as a disputed claim in the parties’ Joint Claim Construction Statement, AACI’s

noninfringement position is, in part, based on its contention that its white layers do not melt. Thus, the term is in controversy.

The claims of the Schwendimann Patents-in-Suit usage of the word “melt” is limited to identifying the “melt point” of components of the image transfer sheet. In the interference proceeding, however, Schwendimann represented that the white layer in each of her claims must melt to effect the image transfer. In the specification, Schwendimann disclosed an embodiment of the white layer that includes a resin that has a “softening point.” Id. 6:13. Therefore, to give effect to Schwendimann’s disclaimer that her white layers must melt, this embodiment must be understood to satisfy the definition of “melt.” AACI’s proposed definition, however, would exclude this embodiment since “change from a solid to liquid” does not mean soften. While AACI argues that melt and soften cannot mean the same thing, “soften” is not a claim term. Moreover, “melt,” although appearing in the claims, is drawn from Schwendimann’s disclaimer and not from the claim language itself. “Melt” will be given its plain and ordinary meaning.

b. AACI Patents-in-Suit

i. Elastic plastic

Claims 1, 11, 18, 20, and 21 of the ’214 Patent recite the term “elastic plastic.” AACI submits “elastic plastic” means “a polymer selected from the group comprising polyurethanes, polyacrylates, polyalkylenes, and natural rubber such as latex.” Claim Construction Statement 53–54. Schwendimann asserts “elastic plastic” is “plastic which must not melt at temperatures less than about 220 degrees Celsius and must have an expansion of at least 200%.” Id.

The claims do not require elastic plastics to have an expansion of at least 200%. The claims teaches that the “white background” includes an elastic plastic and a pigment. ’214

Patent 9:58–59. The specification further teaches that the white background “comprises or consists” of elastic plastics and pigment. Id. 3:30–35. The specification also discloses that the “white background” has to be elastic to avoid fracture by mechanic stress and that means an expansion of 200%. Id. 3:39–44. However, neither the claims nor the specification requires the elastic plastics to have an expansion of 200%, as suggested by Schwendimann. Schwendimann’s proposal is therefore rejected.

AACI’s proposal will be adopted. Although it does not include the temperature limitation that Schwendimann requests, the claims explicitly require elastic plastics that do not melt below 220° C. Therefore, the temperature limitation Schwendimann requests is already captured in the explicit claim language.

ii. Adhesive layer

“Adhesive layer” is found in claims 1, 13, 18, 19, 20, and 21 of the ’214 Patent. AACI submits this term is “a layer containing adhesives, such as a hot-melt layer.” Claim Construction Statement 54. Schwendimann proposes “adhesive layer” means “layer of adhesive which must include dispersed spherical polyester particles of a granular size less than 30 μm .” Id.

The proposed definitions are similar but for Schwendimann’s argument that the adhesive layer “must include dispersed spherical polyester particles of a granular size less than 30 μm .” The doctrine of claim differentiation, however, forecloses Schwendimann’s proposed definition. While claim 1 of the ’214 Patent recites an adhesive layer including dispersed spherical polyester particles of a granular size less than 30 μm , claim 18 recites an adhesive layer without reference to the dispersed spherical polyester particles. Claim differentiation presumes that the scope of the adhesive layer in claim 1 is different than the scope of the adhesive layer in claim 18 because

otherwise the “dispersed spherical polyester” language would be superfluous. This is further supported by the specification, which states that the adhesive layer that includes the 30 μ m polyester particles is a preferred embodiment. If the erroneous language is removed from Schwendimann’s definition, the parties’ definitions are nearly identical. Therefore, “adhesive layer” will be construed to mean “a layer containing adhesives.”

IV. CONCLUSION

Based upon the foregoing, and all the files, records, and proceedings herein, **IT IS HEREBY ORDERED** that:

1. The disputed claim terms in the Schwendimann Patents-in-Suit and the AACI Patents-in-Suit will be construed in accordance with this Order; and
2. AACI’s Motion to Exclude Expert Testimony [Docket No. 281] is **DENIED**.

BY THE COURT:

s/Ann D. Montgomery
ANN D. MONTGOMERY
U.S. DISTRICT JUDGE

Dated: December 2, 2015.